

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference 62138WO (499)		Date of mailing (day/month/year) 10 FEB 2005
International application No. PCT/US04/31532		FOR FURTHER ACTION See paragraph 2 below
International filing date (day/month/year) 24 September 2004 (24.09.2004)	Priority date (day/month/year) 24 September 2003 (24.09.2003)	
International Patent Classification (IPC) or both national classification and IPC IPC(7): A61K 31/59; C07C 401/00 and US Cl.: 514/167; 552/653		
Applicant BIOXELL, INC.		

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Sabiha Qazi Telephone No. (703) 308-1235 <div style="text-align: right; margin-top: 20px;"> <i>Jean Proctor</i> Paralegal Specialist </div>
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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US04/31532

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☐ in written format

☐ in computer readable form

c. time of filing/furnishing

☐ contained in international application as filed.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE
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International application No.

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Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application

☒ claims Nos. 1,3-6 and 9-22

because:

☒ the said international application, or the said claim Nos. 1,5,6 and 9-22 relate to the following subject matter which does not require an international preliminary examination (*specify*):

Claims 1,5,6, and 9-22 objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 6 because claims 1,5,6, and 9-22 are indefinite for the following reason(s):

Claims 1,5,6, and 9-22 are objected to because the term "use of" is improper. There are no steps in the method claims.

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 3 and 4 are so unclear that no meaningful opinion could be formed (*specify*):

Claims 3 and 4 objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 6 because claims 3 and 4 indefinite for the following reason(s): there are no steps on how to obtain and/or synthesize vitamin D3 compounds.

☐ the claims, or said claims Nos. _____ are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for said claims Nos. _____

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐

has not been furnished

☐

does not comply with the standard

the computer readable form

☐

has not been furnished

☐

does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.

☐ See Supplemental Box for further details.

**WRITTEN OPINION OF THE
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International application No.
PCT/US04/31532

Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims <u>NONE</u>	YES
	Claims <u>2, 7, and 8</u>	NO
Inventive step (IS)	Claims <u>NONE</u>	YES
	Claims <u>2, 7, and 8</u>	NO
Industrial applicability (IA)	Claims <u>2, 7, and 8</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and explanations:

Claims 2, 7, and 8 lack novelty under PCT Article 33(2) as being anticipated by US 6,566,353 B2 (BISHOP et al).

BISHOP et al teaches a method of treating hypercalcemia associated with malignant or neoplastic cells, comprising the cells with an effective amount of a Vitamin D compound having a hydrocarbon moiety at the C24 position, where the cells are cancers of the bladder (See claims 1 and 2). See the entire document, especially lines 52-67 in col. 2, lines 1-65 in col. 3, examples, and claims.

Claims 2, 7, and 8 lack an inventive step under PCT Article 33(3) as being obvious over US 6,566,353 B2 (BISHOP et al) for the reasons cited above.

Instant claims differ from the reference in claiming a more specific scope. The reference can treat a variety of different cancers, while the instant invention focuses on the bladder.

One skilled in the art would be motivated to treat cancerous bladder cells with a vitamin D compound because the prior art teaches the same method.

Claims 2, 7, and 8 meet the criteria set out in PCT Article 33(4), and thus meet industrial applicability because the subject matter claimed can be made or used in industry.